Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

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STATEMENT OF LEGAL AND FACTUAL BASIS

DuPont Teijin Films – Hopewell Site
Chesterfield County, Virginia
Permit No. (PRO50418)

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9VAC5 Chapter 80, DuPont Teijin Films – Hopewell Site has applied for a renewal Title V Operating Permit for its Chesterfield County, Virginia facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Permit Writer: _____ Date: _____
Cheryl L. Mayo
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Air Permit Manager: _____ Date: _____
James E. Kyle, P.E.

Regional Director: _____ Date: _____
James J. Golden

FACILITY INFORMATION

Permittee
DuPont Teijin Films – Hopewell Site
3600 Discovery Drive
Chester, Virginia 23836

County-Plant Identification Number: 51-041-00073

FACILITY DESCRIPTION

NAICS Code: 326113 - Film, plastics (except packaging), manufacturing and NAICS 325211 Polyethylene-terephthalate (PET) resins manufacturing.

DuPont Teijin Films Division operates a polymer film manufacturing facility in Chesterfield County, Virginia which produces polyester, PET, film as a final product which is used in many diverse applications. The manufacturing operations are divided into two distinct areas, a polymer plant and a film plant. PET polymer is produced in four separate batch process lines in a two-step batch reaction by the terephthalic acid (TA) process at the polymer plant. The film plant is comprised of seven unique film lines labeled Film Lines 40 and 42 through 47. The basic process for each line is similar, manufacturing bulk polyester film rolls from virgin polymer chip, but there are key differences in equipment and equipment capacity which allow different products to be run on each line

The facility is a Title V major source of volatile organic compounds (VOC) and Hazardous Air Pollutants (HAP). This source is located in an attainment area for pollutants, and is a PSD-sized source. The facility is currently permitted under a minor NSR Permit issued on May 28, 2014, and amended on February 10, 2016, October 17, 2019, and September 3, 2020.

Since the previous Title V Renewal was issued, the underlying NSR permit was amended on October 17, 2019 to increase the throughput of chips received by railcar. This change was incorporated into a Title V minor modification issued February 11, 2020. A second amendment to the underlying NSR permit, to re-locate a vacuum system within the plant, was issued on September 3, 2020.

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, was most recently conducted on August 3, 2021 and August 9, 2021. All reports and other data required by permit conditions or regulations, which are submitted to DEQ, have been evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

EMISSION UNITS

Equipment to be operated consists of:

Fuel Burning Equipment - Boilers

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
1001	1001	Cleaver Brooks Model DL52E distillate oil/natural gas-fired boiler	51 MMBtu/hr	N/A	N/A	N/A	N/A
1002	1002	Cleaver Brooks Model DL52E distillate oil/natural gas-fired boiler	51 MMBtu/hr	N/A	N/A	N/A	N/A
1003	1003	Cleaver Brooks Model DL48E distillate oil/natural gas-fired boiler	47 MMBtu/hr	N/A	N/A	N/A	2/25/1988
1004	1004	Struther-Wells distillate oil/natural gas-fired Dowtherm heater	14 MMBtu/hr	N/A	N/A	N/A	N/A
1005	1005	Struther-Wells distillate oil/natural gas-fired Dowtherm heater	14 MMBtu/hr	N/A	N/A	N/A	N/A

Fuel Burning Equipment – Engines

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
1007	1007	East Fire Water Pump (Cummins Diesel - installed 1971)	340 hp	N/A	N/A	N/A	N/A

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
1008	1008	West Fire Water Pump (Cummins Diesel - installed 1971)	340 hp	N/A	N/A	N/A	N/A
1009	1009	North Fire Water Pump (Cummins - installed 1995)	340 hp	N/A	N/A	N/A	N/A
1010	1010	Emergency Generator (Kohler model 15ROY61 - installed 2003)	27.4 hp	N/A	N/A	N/A	N/A

Polymer Plant Process Equipment

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
0101	0100	**L1 Polymer Plant** (consisting of two-stage polymer reactor system with demister, including but not limited to one EI batch reactor (with a total operating vapor space of 190 cubic feet), one capacity vessel, one methanol/ethylene glycol distillation column, one autoclave batch reactor, and two condensers/heat exchangers)	1000 gals/batch (raw materials)	Polymer Lines 1-4 Scrubber	0100	VOC, HAP	9/3/2020

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
0102	0100	**L2 Polymer Plant** (consisting of two-stage polymer reactor system with demister, including but not limited to one EI batch reactor (with a total operating vapor space of 190 cubic feet), one capacity vessel, one methanol/ethylene glycol distillation column, one autoclave batch reactor, and two condensers/heat exchangers)	1000 gals/batch (raw materials)	Polymer Lines 1-4 Scrubber	0100	VOC, HAP	9/3/2020
0103	0100	**L3 Polymer Plant** (consisting of two-stage polymer reactor system with demister, including but not limited to one EI batch reactor (with a total operating vapor space of 190 cubic feet), one capacity vessel, one methanol/ethylene glycol distillation column, one autoclave batch reactor, and two condensers/heat exchangers)	1000 gals/batch (raw materials)	Polymer Lines 1-4 Scrubber	0100	VOC, HAP	9/3/2020
0104	0100	**L4 Polymer Plant** (consisting of two-stage polymer reactor system with demister, including but not limited to one EI batch reactor (with a total operating vapor space of 190 cubic feet), one capacity vessel, one methanol/ethylene glycol distillation column, one autoclave batch reactor, and two condensers/heat exchangers)	1000 gals/batch (raw materials)	Polymer Lines 1-4 Scrubber	0100	VOC, HAP	9/3/2020
0110	Fugitive	One (1) Hotwell	12,300 gallons	N/A	N/A	N/A	N/A

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
0115	0115	L1 Polymer Chip Blender	1.25 tons/hr	Baghouses, Young Industries 3353	0115	PM	N/A
0116	0116	L2 Polymer Chip Blender	1.25 tons/hr	Baghouses, Young Industries 3353	0116	PM	N/A
0117	0117	L3 Polymer Chip Blender	1.25 tons/hr	Baghouses, Young Industries 3353	0117	PM	N/A
0118	0118	L4 Polymer Chip Blender	1.25 tons/hr	Baghouse, Flex-Kleen 58-CT-14-III	0118	PM	9/3/2020
0119D	0119D	L4 Polymer Hold Up Hopper	1.25 tons/hr	Baghouse, Flex-Kleen 58 CT 18 III	0119D	PM	9/3/2020
0120	0120	One (1) Polymer Plant Process Contact Cooling Tower	600 gallons per minute	N/A	N/A	N/A	N/A
0122	0122	Multi-use Storage Tank (Crude EG/Wastewater)	13,000 gallons	N/A	N/A	N/A	9/3/2020
0123	0123	Multi-use Storage Tank (Crude EG/Wastewater)	13,000 gallons	N/A	N/A	N/A	9/3/2020
0126-0128	0126-0128	Three (3) Crude Glycol Tanks	21,300 gal each	N/A	N/A	N/A	9/3/2020
0151, 0152	0151, 0152	Two (2) Ethylene glycol stills and associated ejector vents	5,000 gal each	Non-contact condensers	0151, 0152	VOC	N/A
0190	Fugitive	Polymer Plant Equipment Leak Components	N/A	N/A	N/A	N/A	N/A
0191	Fugitive	Dowtherm Equipment Leak Components	N/A	N/A	N/A	N/A	N/A
1028	Fugitive	One (1) Effluent pit	18,000 gallons	N/A	N/A	N/A	N/A
1029	Fugitive	One (1) Collection Sump	3,800 gallons	N/A	N/A	N/A	N/A
1051	1051	One (1) Main Cooling Tower	15,700 gallons per minute	N/A	N/A	N/A	N/A
1061	Fugitive	One (1) Equalization Basin	180,000 gallons	N/A	N/A	N/A	N/A
1062	Fugitive	One (1) Bio-treatment Plant(Two Aeration Basins; 220,000 gallons each)	440,000 gallons	N/A	N/A	N/A	N/A

Railroad Car Chip Unloading Operations

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
2040	2040a	No. 1 Railroad Car Chip Unloading Station	7.5 tons/hr	Baghouse, Ultra Industries, #CB-24-84-ARR III	2040a	Particulate	9/3/2020
	2040b	No. 1 Railroad Car Chip Unloading Station	7.5 tons/hr	Baghouse, Flex-Kleen 84CTBC	2040b	Particulate	9/3/2020
2041	2041	No. 2 Railroad Car Chip Unloading Station	7.5 tons/hr	Baghouse, Ultra Industries #CB-24-84-ARR III		Particulate	9/3/2020

Virgin Chip Bunkers

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
2001	2001	Virgin Chip Bunker #1	7.5 tons/hr	N/A	N/A	N/A	9/3/2020
2002	2002	Virgin Chip Bunker #2	7.5 tons/hr	N/A	N/A	N/A	9/3/2020
2003	2003	Virgin Chip Bunker #3	7.5 tons/hr	N/A	N/A	N/A	9/3/2020
2004	2004	Virgin Chip Bunker #4	7.5 tons/hr	N/A	N/A	N/A	9/3/2020
2005	2005	Virgin Chip Bunker #5	7.5 tons/hr	N/A	N/A	N/A	9/3/2020
2006	2006	Virgin Chip Bunker #6	7.5 tons/hr	N/A	N/A	N/A	9/3/2020
2007	2007	Virgin Chip Bunker #7	7.5 tons/hr	N/A	N/A	N/A	9/3/2020
2008	2008	Virgin Chip Bunker #8	7.5 tons/hr	N/A	N/A	N/A	9/3/2020
2009	2009	Virgin Chip Bunker #9	7.5 tons/hr	N/A	N/A	N/A	9/3/2020
2010	2010	Virgin Chip Bunker #10	7.5 tons/hr	N/A	N/A	N/A	9/3/2020
2011	2011	Virgin Chip Bunker #11	7.5 tons/hr	N/A	N/A	N/A	9/3/2020

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
2012	2012	Virgin Chip Bunker #12	7.5 tons/hr	N/A	N/A	N/A	9/3/2020
2013	2013	Virgin Chip Bunker #13	7.5 tons/hr	N/A	N/A	N/A	9/3/2020
2014	2014	Virgin Chip Bunker #14	7.5 tons/hr	N/A	N/A	N/A	9/3/2020
2015	2015	Virgin Chip Bunker #15	7.5 tons/hr	N/A	N/A	N/A	9/3/2020
2016	2016	Virgin Chip Bunker #16	7.5 tons/hr	N/A	N/A	N/A	9/3/2020
2017	2017	Virgin Chip Bunker #17	7.5 tons/hr	N/A	N/A	N/A	9/3/2020
2018	2018	Virgin Chip Bunker #18	7.5 tons/hr	N/A	N/A	N/A	9/3/2020
2019	2019	Virgin Chip Bunker #19	7.5 tons/hr	N/A	N/A	N/A	9/3/2020
2020	2020	Virgin Chip Bunker #20	7.5 tons/hr	N/A	N/A	N/A	9/3/2020
2021	2021	Virgin Chip Bunker #21	7.5 tons/hr	N/A	N/A	N/A	9/3/2020
2022	2022	Virgin Chip Bunker #22	7.5 tons/hr	N/A	N/A	N/A	9/3/2020
2023	2023	Virgin Chip Bunker #23	7.5 tons/hr	N/A	N/A	N/A	9/3/2020
2024	2024	Virgin Chip Bunker #24	7.5 tons/hr	N/A	N/A	N/A	9/3/2020

Film Line 40 – L40

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
4001	4001	L40 Virgin Head Hopper Cyclone	11.3 ton/hr	N/A	N/A	N/A	9/3/2020
4002	4002	L40 Virgin Head Hopper Vent	11.3 ton/hr	N/A	N/A	N/A	9/3/2020
4003	4003	L40 Reclaim Head Hopper Cyclone	11.3 ton/hr	N/A	N/A	N/A	9/3/2020
4004	4004	L40 Reclaim Head Hopper Vent	11.3 ton/hr	N/A	N/A	N/A	9/3/2020

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
4011	4011	L40 Crystallizer Filter Receiver	1.75 tons/hr	Baghouse, Young Industries 8813	4011	Particulate	9/3/2020
4012	4012	L40 Main Dryer System	1.75 tons/hr	Baghouse, Flex Kleen	4012	Particulate	9/3/2020
4021	4021	L40 Casting Drum (no external vent)	1.75 tons/hr	N/A	N/A	N/A	9/3/2020
4031	4031	L40 Stenter Oven - Neutral Zone	1.75 tons/hr	N/A	N/A	N/A	9/3/2020
4032	4032	L40 Stenter Oven - Fume Exhaust	1.75 tons/hr	N/A	N/A	N/A	9/3/2020
4033	4033	L40 Stenter Oven - Clip Cooling Exhaust	1.75 tons/hr	N/A	N/A	N/A	9/3/2020
4034	4034	L40 Stenter 3rd Crystallizer	1.75 tons/hr	N/A	N/A	N/A	9/3/2020
4035	4035	L40 Stenter Cooling Zone	1.75 tons/hr	N/A	N/A	N/A	9/3/2020

Film Line 42 – L42

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
4201a	4201a	L42 Virgin Head Hopper Cyclone	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4201b	4201b	L42 Virgin Head Hopper Vent	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4203a	4203a	L42 Reclaim Head Hopper Cyclone	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4203b	4203b	L42 Reclaim Head Hopper Vent	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4204	4204	L42 Master Batch Dryer Vacuum Loader Cyclone	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4205a	4205a	L42 Master Batch Head Hopper Cyclone	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4205b	4205b	L42 Master Batch Head Hopper Vent	11.3 tons/hr	N/A	N/A	N/A	9/3/2020

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
4211	4211	L42 Main Dryer System - Rotary Type Chip Crystallization Dryer	1.25 tons/hr	N/A	N/A	N/A	9/3/2020
4212	4212	L42 Master Batch Dryer	1.25 tons/hr	N/A	N/A	N/A	9/3/2020
4221	4231	L42 Casting Drum	1.25 tons/hr	N/A	N/A	N/A	9/3/2020
4231	4231	L42 Stenter - Neutral Zone	1.25 tons/hr	N/A	N/A	N/A	9/3/2020
4232	4232	L42 Stenter - Fume Exhaust	1.25 tons/hr	N/A	N/A	N/A	9/3/2020
4261	4261a	L42 Air Classifier	1.25 tons/hr	Baghouse, Flex-Kleen 84CT-I8	4261a	Particulate	9/3/2020
	4261b			Baghouse, Young Industries	4261b	Particulate	9/3/2020
4271	4271	L42/L43 House Vacuum System	0.009 tons/hr	Baghouse, Hoffman GS33481	4271	Particulate	9/3/2020

Film Line 43 – L43

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
4301a	4301a	L43 Virgin Head Hopper #1 Cyclone	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4301b	4301b	L43 Virgin Head Hopper #1 Vent	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4303a	4303a	L43 Reclaim Head Hopper Cyclone	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4303b	4303b	L43 Reclaim Head Hopper Vent	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4304	4304	L43 Virgin Head Hopper #2 Vent	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4305a	4305a	L43 Co-extrusion Head Hopper #1 Cyclone	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4305b	4305b	L43 Co-extrusion Head Hopper #1 Vent	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4306	4306	L43 Co-extrusion Head Hopper #2	11.3 tons/hr	N/A	N/A	N/A	9/3/2020

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
4307	4307	L43 Co-extrusion Chip Convey System	1.25 tons/hr	Baghouse, Flex-Kleen 56 CTBS8 III	4307	Particulate	9/3/2020
4308	4308	L43 Master Batch Head Hopper Vacuum Loader Cyclone	4.0 tons/hr	N/A	N/A	N/A	9/3/2020
4309	4309	L43 Master Batch Dryer Vacuum Loader Cyclone	4.0 tons/hr	N/A	N/A	N/A	9/3/2020
4311	4311	L43 Main Dryer System - Rotary Type Chip Crystallization Dryer	1.25 tons/hr	N/A	N/A	N/A	9/3/2020
4313	4313	L43 Co-extrusion Dryer System	1.25 tons/hr	Baghouse, Flex-Kleen 58BVBC-9 III	4313	Particulate	9/3/2020
4314	4314	L43 Main Extruder Vacuum Pump	2.5 tons/hr	Baghouse, Sprout Waldorn	4314	Particulate	9/3/2020
4322	4322a	L43 Casting Drum	2.5 tons/hr	N/A	N/A	N/A	9/3/2020
	4322b	L43 Casting Drum Air Horn Exhaust		N/A	N/A	N/A	9/3/2020
4331	4331	L43 Stenter Oven - Clip Cooling Zone	2.5 tons/hr	N/A	N/A	N/A	9/3/2020
4332	4332	L43 Stenter Oven – 1st Preheat	2.5 tons/hr	N/A	N/A	N/A	9/3/2020
4333	4333	L43 Stenter Oven - Neutral Zone	2.5 tons/hr	N/A	N/A	N/A	9/3/2020
4335	4335	L43 Stenter Oven - Cooling Zone	2.5 tons/hr	N/A	N/A	N/A	9/3/2020
4372	4372	L43 House Vacuum System	0.006 tons/hr	Baghouse, Hoffman HPC 10-58	4372	Particulate	9/3/2020

Film Line 44 – L44

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
4401	4401	L44 Virgin and Reclaim Head Hoppers Cyclone System	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4402	4402	L44 Virgin Head Hopper Vent	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4403	4403	L44 Reclaim Head Hopper Vent	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4404a	4404a	L44 Co-Extrusion Head Hopper Cyclone	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4404b	4404b	L44 Co-Extrusion Head Hopper Vent	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4405a	4405a	L44 Master Batch Head Hopper #1 Cyclone	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4405b	4405b	L44 Master Batch Head Hopper #1 Vent	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4406	4606	L44 Air Classifier (vents to common baghouse located on Line 46)	11.3 tons/hr	Baghouse, Flex-Kleen 100-WSBS-100 IIIG	4606	Particulate	9/3/2020
4407a	4407a	L44 Master Batch Head Hopper #2 Cyclone	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4407b	4407b	L44 Master Batch Head Hopper #2 Vent	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4408a	4408a	L44 Master Batch Head Hopper #3 Cyclone	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4408b	4408b	L44 Master Batch Head Hopper #3 Vent	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4409a	4409a	L44 Master Batch Head Hopper #4 Cyclone	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4409b	4409b	L44 Master Batch Head Hopper #4 Vent	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4411	4411	L44 Main Dryer System	2.05 tons.hr	Baghouse, Flex Kleen 58-CT-14-III	4411	Particulate	9/3/2020

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
4412	4412	L44 Co-extrusion Dryer System	2.05 tons.hr	Baghouse, Flex Kleen 58CTBC-8-III	4412	Particulate	9/3/2020
4422	4422	L44 Casting Drum	2.05 tons.hr	N/A	N/A	N/A	9/3/2020
4431	4431	L44 Stenter - Preheat Make-up Exhaust	2.05 tons.hr	N/A	N/A	N/A	9/3/2020
4432	4432	L44 Stenter - Fume Exhaust	2.05 tons.hr	N/A	N/A	N/A	9/3/2020
4433	4433	L44 Stenter - Neutral Zone Exhaust	2.05 tons.hr	N/A	N/A	N/A	9/3/2020
4434	4434	L44 Stenter - Clip Cooling Exhaust	2.05 tons.hr	N/A	N/A	N/A	9/3/2020
4435	4435	L44 Stenter - 6th Crystallizer	2.05 tons.hr	N/A	N/A	N/A	9/3/2020
4461	4461	L44 Cutters	1.025 tons/hr	Baghouse, Flex-Kleen #100-WRC-144-III-G	4461	Particulate	9/3/2020
4474	4474	L44 Global Baghouse and House Vacuum System	0.021 tons/hr	Baghouse, Hoffman 40 x 166	4474	Particulate	9/3/2020

Film Line 45 – L45

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
4500a	4500a	L45 Virgin Head Hopper Cyclone	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4500b	4500b	L45 Virgin Head Hopper Vent	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4502a	4502a	L45 Reclaim Head Hopper Cyclone	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4502b	4502b	L45 Reclaim Head Hopper Vent	11.3 tons/hr	N/A	N/A	N/A	9/3/2020

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
4504a	4504a	L45 Master Batch Head Hopper #1 Cyclone	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4504b	4504b	L45 Master Batch Head Hopper #1 Vent	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4505a	4505a	L45 Master Batch Head Hopper #2 Cyclone	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4505b	4505b	L45 Master Batch Head Hopper #2 Vent	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4506a	4506a	L45 Co-extrusion Head Hopper Cyclone	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4506b	4506b	L45 Co-extrusion Head Hopper Vent	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4507a	4507a	L45 Master Batch Head Hopper #3 Cyclone	4.0 tons/hr	N/A	N/A	N/A	9/3/2020
4507b	4507b	L45 Master Batch Head Hopper #3 Vent	4.0 tons/hr	N/A	N/A	N/A	9/3/2020
4508a	4508a	L45 Master Batch Head Hopper #4 Cyclone	4.0 tons/hr	N/A	N/A	N/A	9/3/2020
4508b	4508b	L45 Master Batch Head Hopper #4 Vent	4.0 tons/hr	N/A	N/A	N/A	9/3/2020
4511	4511	L45 Main Dryer System	2.5 tons/hr	Baghouse, Flex-Kleen 58 CTBG 14 III	4511	Particulate	9/3/2020
4512	4512	L45 Co-extrusion Dryer System	2.5 tons/hr	Baghouse, Flex-Kleen 58 BVBS-9 III	4512	Particulate	9/3/2020
4513	4513	L45 Master Batch Dryer System	2.5 tons/hr	Baghouse, Young Ind. VC60-9-32	4513	Particulate	9/3/2020
4514	4514	L45 Main Extruder Vacuum Pump	2.5 tons/hr	Cartridge Filter, SIDCO	4514	Particulate	9/3/2020
4522	4522	L45 Casting Drum (no external vent)	2.5 tons/hr	N/A	N/A	N/A	9/3/2020

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
4531	4531	L45 Stenter Oven - Fume and Neutral Zone	2.5 tons/hr	N/A	N/A	N/A	9/3/2020
4532	4532	L45 Stenter Oven - Cooling Zone	2.5 tons/hr	N/A	N/A	N/A	9/3/2020
4533	4533	L45 Stenter Oven - Clip Cooling Zone	2.5 tons/hr	N/A	N/A	N/A	9/3/2020
4534	4534	L45 Stenter Oven - Preheat Oven 1	2.5 tons/hr	N/A	N/A	N/A	9/3/2020
4561	4561	L45 Cutters	1.25 tons/hr	Baghouse, Flex-Kleen 84 WRB- 64 IIIG	4561	Particulate	9/3/2020
4571	4571	L40/L45 House Vacuum System	0.011 tons/hr	Baghouse, Hoffman 30695	4571	Particulate	9/3/2020

Film Line 46 – L46

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
4601a	4601a	L46 Head Hopper Cyclone	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4601b	4601b	L46 Virgin Head Hopper Vent	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4601c	4601c	L46 Master Batch Head Hopper Vent	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4601d	4601d	L46 Reclaim Head Hopper Vent	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4601e	4601e	L46 Co-extrusion Virgin Head Hopper Vent	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4601f	4601f	L46 Co-extrusion Reclaim Head Hopper Vent	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4601g	4601g	L46 Auxiliary Head Hopper Vent	11.3 tons/hr	N/A	N/A	N/A	N/A
4606	4606	L46 Air Classifier	11.3 tons/hr	Baghouse, Flex-Kleen 100-WSBS-100 IIIG	4606	Particulate	9/3/2020

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
4611	4611	L46 Main and Co-extrusion Dryer Systems	3.7 tons/hr	Baghouse, Flex-Kleen 58CT-14	4611	Particulate	9/3/2020
4621	4621	L46 Casting Drum (no external vent)	3.7 tons/hr	N/A	N/A	N/A	9/3/2020
4631	4631	L46 Stenter Oven - Preheat Oven Exhaust	3.7 tons/hr	N/A	N/A	N/A	9/3/2020
4632	4632	L46 Stenter Oven - Fume and Neutral Zone	3.7 tons/hr	N/A	N/A	N/A	9/3/2020
4633	4633	L46 Stenter Oven - Clip Cooling Zone	3.7 tons/hr	N/A	N/A	N/A	9/3/2020
4634	4634	L46 Stenter Oven - Oven Exhaust	3.7 tons/hr	N/A	N/A	N/A	9/3/2020
4661	4661a	L46 Cutters	1.85 tons/hr	Baghouse, Flex-Kleen No. 100 MRC-144	4661a	Particulate	9/3/2020
	4661b			Baghouse, Flex-Kleen 84 WRBC-48	4661b	Particulate	9/3/2020
4671	4671	L46 House Vacuum System	0.034 tons/hr	Baghouse, Hoffman 36 x 144	4671	Particulate	9/3/2020

Film Line 47 – L47

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
4701a	4701a	L47 Virgin Head Hopper Cyclone	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4701b	4701b	L47 Virgin Head Hopper Vent	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4703a	4703a	L47 Reclaim Head Hopper Cyclone	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4703b	4703b	L47 Reclaim Head Hopper Vent	11.3 tons/hr	N/A	N/A	N/A	9/3/2020

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
4705a	4705a	L47 Master Batch Head Hopper Cyclone	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4705b	4705b	L47 Master Batch Head Hopper Vent	11.3 tons/hr	N/A	N/A	N/A	9/3/2020
4711	4711	L47 Main Dryer System	3.7 tons/hr	Baghouse, Sprout Bauer CB-14-58	4711	Particulate	9/3/2020
4712	4712	L47 Main Extruder Vacuum Pump	3.7 tons/hr	Baghouse, Flex-Kleen 08 CTBC 8 III	4712	Particulate	9/3/2020
4721	4721	L47 Casting Drum (no external vent)	3.7 tons/hr	N/A	N/A	N/A	9/3/2020
4732	4732	L47 Stenter Oven - Neutral Zone Exhaust	3.7 tons/hr	N/A	N/A	N/A	9/3/2020
4733	4733	L47 Stenter Oven - 1st Preheat Oven Exhaust	3.7 tons/hr	N/A	N/A	N/A	9/3/2020
4734	4734	L47 Stenter Oven - Cooling Zone Exhaust	3.7 tons/hr	N/A	N/A	N/A	9/3/2020
4735	4735	L47 Stenter Oven - Clip Cleaning Exhaust	3.7 tons/hr	N/A	N/A	N/A	9/3/2020
4736	4736	L47 Stenter Oven - 4th Crystallizer & 1st Cooling Zone Exhaust	3.7 tons/hr	N/A	N/A	N/A	9/3/2020
4737	4737	L47 Stenter Oven - Clip Cooling Exhaust	3.7 tons/hr	N/A	N/A	N/A	9/3/2020
4738	4738	L47 Stenter Oven - Clip Debris Removal System	3.7 tons/hr	N/A	N/A	N/A	9/3/2020
4761	4761	L47 Cutters	1.85 tons/hr	Baghouse, Sprout Bauer RS-144-100	4761	Particulate	9/3/2020
4763	4763	L47 House Vacuum System	0.009 tons/hr	Baghouse, Hoffman 36 x 120	4763	Particulate	9/3/2020

Film Coating Systems

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
4025	Fugitive	L40 Film Coating Application System (41 inch)	20 gallons/hr	N/A	N/A	N/A	9/3/2020
4225	Fugitive	L42 Film Coating Application System (41 inch)	20 gallons/hr	N/A	N/A	N/A	9/3/2020
4325	Fugitive	L43 Film Coating Application System (41 inch)	20 gallons/hr	N/A	N/A	N/A	9/3/2020
4425	Fugitive	L44 Film Coating Application System (41 inch)	20 gallons/hr	N/A	N/A	N/A	9/3/2020
4525	Fugitive	L45 Film Coating Application System (45 inch)	20 gallons/hr	N/A	N/A	N/A	9/3/2020
4625	Fugitive	L46 Film Coating Application System (80 inch)	30 gallons/hr	N/A	N/A	N/A	9/3/2020
4725	Fugitive	L47 Film Coating Application System (45 inch)	20 gallons/hr	N/A	N/A	N/A	9/3/2020

Primary Flake Bunkers

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
6001-6004	6074	Primary Flake Bunkers #1 - #4	4.5 tons/hr	Baghouse, Young Industries 96 120	6074	Particulate	9/3/2020
	6078			Baghouse, Flex-Kleen 100 WRWC 80 III	6078	Particulate	9/3/2020
6005	6005	Primary Flake Bunker #5	4.5 tons/hr	Baghouse, Flex-Kleen WRC 48M36 II	6005	Particulate	9/3/2020
6006	6006	Primary Flake Bunker #6	4.5 tons/hr	Baghouse, Flex-Kleen 100 CT 64 II	6006	Particulate	9/3/2020

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
6007	6007	Primary Flake Bunker #7	4.5 tons/hr	Baghouse, Flex-Kleen 100 CT 64 II	6007	Particulate	9/3/2020
6008	6008	Primary Flake Bunker #8	4.5 tons/hr	Baghouse, Flex-Kleen 100 CT 64 II	6008	Particulate	9/3/2020
6009	6009	Primary Flake Bunker #9	4.5 tons/hr	Baghouse, Flex-Kleen 100 CT 64 II	6009	Particulate	9/3/2020
6010	6010	Primary Flake Bunker #10	4.5 tons/hr	Baghouse, Flex-Kleen WRC 48M36 II	6010	Particulate	9/3/2020
6011	6011	Primary Flake Bunker #11	4.5 tons/hr	Baghouse, Flex-Kleen 100 CT 64 II	6011	Particulate	9/3/2020
6012	6012	Primary Flake Bunker #12	4.5 tons/hr	Baghouse, Flex-Kleen 100 CT 64 II	6012	Particulate	9/3/2020
6013	6013	Primary Flake Bunker #13	4.5 tons/hr	Baghouse, Flex-Kleen WRC 48M36 II	6013	Particulate	9/3/2020
6014	6014	Primary Flake Bunker #14	4.5 tons/hr	Baghouse, Flex-Kleen WRC 48M36 II	6014	Particulate	9/3/2020
6015	6015	Primary Flake Bunker #15	4.5 tons/hr	Baghouse, Flex-Kleen 100 CTBC 64 II G	6015	Particulate	9/3/2020
6016	6016	Primary Flake Bunker #16	4.5 tons/hr	Baghouse, Flex-Kleen 100 CTBC 64 II G	6016	Particulate	9/3/2020
6017	6017	Primary Flake Bunker #17	4.5 tons/hr	Baghouse, Flex-Kleen 100 CTBC 64 II G	6017	Particulate	9/3/2020
6018	6018	Primary Flake Bunker #18	4.5 tons/hr	Baghouse, Flex-Kleen 100 CTBC 64 II G	6018	Particulate	9/3/2020

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
6019	6019	Primary Flake Bunker #19	4.5 tons/hr	Baghouse, Flex-Kleen 100 CTBC 64 II G	6019	Particulate	9/3/2020
6020	6020	Primary Flake Bunker #20	4.5 tons/hr	Baghouse, Flex-Kleen 100 CTBC 64 II G	6020	Particulate	9/3/2020
6021	6021	Primary Flake Bunker #21 (located at Film Line 45)	1.25 tons/hr	Baghouse, Ultra Industries CB 65 100 II G	6021	Particulate	9/3/2020

Intermediate Flake Bunkers

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
6041	6041	Intermediate Flake Bunker #1	1.75 tons/hr	Baghouse, Flex-Kleen 100 CT 18 II	6041	Particulate	9/3/2020
6042	6042	Intermediate Flake Bunker #2	1.75 tons/hr	Baghouse, Flex-Kleen 100 CT 18 II	6042	Particulate	9/3/2020
6043	6043	Intermediate Flake Bunker #3	1.75 tons/hr	Baghouse, Flex-Kleen 100 CT 18 II	6043	Particulate	9/3/2020
6044	6044	Intermediate Flake Bunker #4	1.75 tons/hr	Baghouse, Flex-Kleen 100 CT 18 II	6044	Particulate	9/3/2020
6045	6045	Intermediate Flake Bunker #5	1.75 tons/hr	Baghouse, Ultra Industries CB 34 100 II G	6045	Particulate	9/3/2020

Scrap Bunker

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
6051	6051	Scrap Bunker	1.75 tons/hr	Baghouse, Flex-Kleen 30 PCBL 24 II G	6051	Particulate	N/A

Flake Dryers

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
6066 and 6073	6066	Flake Dryer #1 #4	1.75 tons/hr	Baghouse, Flex-Kleen 84 BVBC 16 III G	6066	Particulate	9/3/2020
	6073		1.75 tons/hr	Baghouse, Young Industries VC 96 54 84 Style B	6073	Particulate	9/3/2020
6067 and 6073	6067	Flake Dryer #2 and #3	1.75 tons/hr	Baghouse, Flex-Kleen 84 BVBC 16 III G	6067	Particulate	9/3/2020
	6073		1.75 tons/hr	Baghouse, Young Industries VC 96 54 84 Style B	6073	Particulate	9/3/2020
6070	6070	Flake Dryer # 5	1.75 tons/hr	Baghouse, Flex-Kleen 84 BVBS 16 III	6070	Particulate	9/3/2020

Recycle House Vacuum Systems

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description **	PCD ID	Pollutant Controlled	Applicable Permit Date
6071	6071	Recovery House Vacuum System	0.1 tons/hr	Baghouse, Hoffman GS 22052B	6071	Particulate	N/A
6072	6072	Pelletizing Flake and Chip House Vacuum System	0.1 tons/hr	Baghouse, Hi-Vac 840	6072	Particulate	N/A

*The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.

** The Pollution Control Device Description is provided for informational purposes only. Inclusion in the above table does not constitute a requirement that the devices be used.

EMISSIONS INVENTORY

Emissions from the facility in 2020 are summarized in the following tables.

2020 Criteria Pollutant and Greenhouse Gas Emissions in Tons/Year

Emissions	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$	NO_X	CO_2e
Total	37.4	12.1	0.1	12.7	12.7	14.4	NR

2020 Facility Hazardous Air Pollutant (HAP) Emissions

Pollutant	2020 Hazardous Air Pollutant Emission in Tons/Yr
Acetaldehyde	11.00
Formaldehyde	1.45
Methanol	7.79
n-Hexane	0.26

FUEL BURNING EQUIPMENT APPLICABLE REQUIREMENTS – Boilers and Dowtherm Heaters (ID#s 1001-1005)

Limitations

The Chapter 40 Existing Source Standards for Fuel Burning Equipment (Rule 4-8) from Virginia's regulations, which includes a Visible Emissions standard, apply to Boilers #1001 and #1002 and the two Dowtherm heaters (#1004 and #1005).

The Chapter 50 New and Modified source visible emissions standard (Rule 5-1) is taken from 9 VAC 5-50-80 from the Virginia Regulations, and applies to boiler #1003.

Limitations for the boiler #1003 are taken from the 2/25/1988 NSR permit.

Limitations from for the Boilers #1001-1002 and the Dowtherm Heaters #1004-1005

Title V Condition 1 includes the Rule 4-8 standards for PM and sulfur dioxide for boilers #1001-1002 and the Dowtherm heaters (#1004-1005), which are existing fuel burning equipment.

Title V Condition 2 incorporates the visible emissions standard of 20% opacity (except for one six-minute period in any one hour of not more than 60% opacity) from 9VAC5-40-940 of the Virginia Regulations.

Limitation for Boiler #1003 from Rule 5-1 (from 9VAC5-50-80 of the Virginia Regulations)

Title V Condition 3 limits opacity from boiler #1003 to 20% (except for one six-minute period in any one hour of not more than 30% opacity) from 9VAC5-50-80 of the Virginia Regulations.

Limitations for Boiler #1003 (from 2/25/1988 NSR Permit)

Condition 4 of the 2/25/1988 NSR Permit **(Title V Condition 4)** limits the throughput of natural gas and distillate oil to boiler #1003.

Conditions 5-7 of the 2/25/1988 NSR Permit **(Title V Conditions 5-7)** limit hourly and annual PM, sulfur dioxide, and nitrogen oxide emissions from boiler #1003.

Condition 8 of the 2/25/1988 NSR Permit **(Title V Condition 8)** lists natural gas and fuel oil as the authorized fuels for boiler #1003.

Condition 9 of the 2/25/1988 NSR Permit **(Title V Condition 9)** limits the fuel oil sulfur content to 0.2 percent by weight.

Monitoring/Recordkeeping

The EPA periodic monitoring guidance, dated September 18, 1998, requires periodic monitoring for each emission point at a source, subject to Title V of the Act, which is subject to an applicable requirement. The 2/25/1998 NSR Permit has been reviewed and is determined to contain sufficient monitoring, recordkeeping, and reporting provisions to qualify as periodic monitoring, recordkeeping, and reporting provisions for boiler #1003, with the exception of periodic monitoring for compliance with the opacity standard from 9VAC5-50-80.

Title V Condition 10 has been added to fulfill the periodic monitoring requirements for the visible emissions standards in **Title V Conditions 2 and 3**.

Condition 9 of the 2/25/1988 NSR permit requires the permittee to keep records of the throughput of natural gas and distillate oil for boiler #1003, as well as records of fuel sulfur content. These are included **Title V Condition 11 (a & b)** for all boilers and Dowtherm heaters. **Title V Condition 11c** requires records necessary to demonstrate compliance with **Title V Condition 1**, and **Title V Condition 11d** requires records of visible emission observations required by **Title V Condition 10**, as well as any corrective action taken as a result of these inspections.

Reporting

*There are no reporting requirements in the 2/25/1988 NSR permit. **Title V Condition 12** has been added in order to require reporting of any Method 9 opacity test performed during the reporting period, and any exceedance of the opacity standards.*

MACT SUBPART DDDDD – NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR MAJOR SOURCES: INDUSTRIAL, COMMERICAL, AND INSTITUTIONAL BOILERS AND PROCESS HEATERS

40 CFR 63 Subparts A and DDDDD (Industrial Boiler MACT) apply to the three boilers and the two Dowtherm units. Although all of the units can burn distillate oil as a backup, they are all considered to be existing Gas 1 units for the purposes of the Boiler MACT, and as such they are subject only to work practice requirements in Table 3 to Subpart DDDDD, paragraphs 3 and 4, which require a one-time energy assessment and an annual tune-up. According to the MACT Subpart DDDDD Notice of Compliance Status dated March 8, 2016, the one-time energy assessment has been performed.

Limitations

Title V Condition 13 specifies that all the boilers and Dowtherm heaters are in the Gas 1 fuels subcategory. They are subject only to work practice requirements (annual tune-ups).

Title V Condition 14 requires annual tune-ups of each boiler and heater in accordance with **40 CFR 63.7540(a)(10).**

Monitoring/Recordkeeping

40 CFR 64.2(b)(1)(i) states that MACT (40 CFR 63) standards proposed after November 15, 1990 by default can be considered to include monitoring, recordkeeping, and reporting provisions sufficient to qualify as periodic monitoring without additional requirements. Thus no additional periodic monitoring discussion is included for 40 CFR 63 Subpart DDDDD (Boilers and process heaters)

Title V Condition 15 includes the recordkeeping requirements of **40 CFR 63.7555(a).**

Reporting

Title V Condition 16 requires the permittee to submit annual compliance reports electronically in accordance with **40 CFR 63.7550(b)(c), and (h)(3)**.

FUEL BURNING EQUIPMENT APPLICABLE REQUIREMENTS - Diesel Emergency Engines (ID#s 1007-1010)

The Chapter 50 New and Modified source visible emissions standard (Rule 5-1) is taken from 9 VAC 5-50-80 from the Virginia Regulations, and applies to units #1007-1010. All of the engines and water pumps were exempt from NSR permitting.

Limitation

Title V Condition 17 limits opacity from engines (#1007-1010) to 20% (except for one six-minute period in any one hour of not more than 30% opacity) from 9VAC5-50-80 of the Virginia Regulations.

Monitoring/Recordkeeping

The EPA periodic monitoring guidance, dated September 18, 1998, requires periodic monitoring for each emission point at a source, subject to Title V of the Act, which is subject to an applicable requirement.

Title V Condition 18 has been added to fulfill the periodic monitoring requirements for the visible emissions standards in **Title V Condition 17**.

Title V Condition 19 requires records of visible emission observations required by **Title V Condition 18**, as well as any corrective action taken as a result of these inspections.

Reporting

Title V Condition 20 has been added in order to require reporting of any Method 9 opacity test performed during the reporting period, and any exceedance of the opacity standards.

MACT SUBPART ZZZZ – NATIONAL EMISSIONS STANDARDS FOR STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES (ID#s 1007-1010)

There are three 340 hp diesel water pumps at the facility (340 hp), two installed in 1971 and one installed in 1995. A diesel emergency generator (27.4 hp) was installed in 2003. These engines are subject to the MACT Subpart ZZZZ standards for diesel engines located at a major source of HAP.

Limitations

Title V Condition 21 states that the permittee shall operate in compliance with MACT Subparts A and ZZZZ for existing stationary RICE located at a major source of HAP emissions.

Title V Condition 22 requires each engine to be equipped with a non-resettable hour meter **(40 CFR 63.6625(f)).**

Title V Condition 23 requires the facility to:

- Perform the work practice requirements of Table 2c(1) to Subpart ZZZZ of Part 63 as required by **40 CFR 63.6602**;
- Gives the facility the option to utilize an oil analysis program as described by **40 CFR 63.6625(i)** in order to extend the specified oil change requirement; and
- Requires the permittee to minimize time spend at idle during startup as required by **40 CFR 63.6625(h)**.

Title V Condition 24 limits the hours of operation in non-emergency situations as well as maintenance checks and readiness testing according to **40 CFR 63.6640(f).**

Monitoring/Recordkeeping
40 CFR 64.2(b)(1)(i) states that MACT (40 CFR 63) standards proposed after November 15, 1990 by default can be considered to include monitoring, recordkeeping, and reporting

provisions sufficient to qualify as periodic monitoring without additional requirements. Thus no additional periodic monitoring discussion is included for 40 CFR 63 Subpart ZZZZ.

Title V Condition 25 requires records of hours of operation (including whether the operation was emergency or non-emergency in nature), records of maintenance, and records of occurrence and duration of each malfunction (and any corrective actions taken) in accordance with **40 CFR 63.6655 and 63.6660**.

PROCESS EQUIPMENT REQUIREMENTS - POLYMER PLANT PROCESS EQUIPMENT (ID# 0101-0104, 0110, 0116-0120, 0126-0134, 0139, 0151-0152, 0177 1027-1029, 1051, 1061-1062)

Limitations

The current limitations for the polymer plant process equipment were developed from the 9/3/2020 NSR permit and the May 30, 1996 VOC RACT Agreement.

Limitations from the 9/3/2020 NSR Permit

Condition 3 of the 9/3/2020 NSR Permit **(Title V Condition 26)** limits the number of TA batches from L1 through L4 (ID #0101-0104), as well as the number of TA batches from the Crude Glycol Tanks (total for ID #0122-0123 and 0126-0128).

Condition 4 of the 9/30/2020 NSR Permit **(Title V Condition 27)** limits VOC emissions from this equipment.

Limitations from the 5/30/1996 VOC RACT Agreement

Condition E.2 of the 5/30/1996 VOC RACT Agreement **(Title V Condition 29)** requires the facility to implement the LDAR requirements of NSPS Subpart VV as if the polymer plant was considered an "affected facility" under 40 CFR 60.480 and as if all the raw materials, intermediate, and final products used/produced at the facility were listed in 40 CFR 60.489. *The facility is not actually subject to NSPS Subpart VV.*

Condition E.3 of the 5/30/1996 VOC RACT Agreement **(Title V Condition 28)** requires the use of non-contact condensers on the ethylene glycol stills' vacuum systems.

Monitoring/Recordkeeping

The 9/3/2020 NSR Permit and 1996 VOC RACT Agreement were created after 1990. Review of these documents shows that the monitoring, recordkeeping, and reporting provisions are sufficient to qualify as periodic monitoring without additional requirements. The 9/3/2020 NSR

permit contains material throughput limitations and associated recordkeeping conditions, and the 5/30/1996 VOC RACT Agreement includes a monitoring protocol (annual inspections and associated recordkeeping) in Condition E.3. Condition E.2 of the 5/30/1996 VOC RACT Agreement includes all the requirements of NSPS Subpart VV, which was promulgated after November 15, 1990.

Title V Condition 30 requires the throughput records for the TA polymer line, records of annual inspections for the non-contact condensers, and LDAR records required by NSPS Subpart VV.

Reporting
Because the facility is not actually subject to NSPS Subpart VV, the reports that would be required by the Subpart are kept on site rather than sent to EPA.

MACT SUBPART JJJ – NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANT EMISSIONS: GROUP IV POLYMERS AND RESINS (ID#'s 0101-0104, 0122-0123, 0126-0128, 0151-0152, 0190-0191)

Polymer Plant processing equipment is subject to the requirements of 40 CFR 63 Subpart JJJ. The rule covers batch process vents, storage vessels, wastewater streams, and fugitive equipment leaks. According to the November 2012 Notification of Compliance Status, all batch process vents and wastewater streams at the facility are identified as Group 2. The Crude EG Storage Tanks are also identified as Group 2. Since there are no Group 1 emission points associated with the Polymer Plant while operating on the TA process, there are no applicable HAP emission control requirements for the batch process vents, storage vessels, or wastewater streams.

Limitations

Title V Condition 31 incorporates MACT Subpart JJJ by reference, and identifies requirements that apply (or that in some cases do not apply) for equipment in the polymer plant (batch process vents, storage tanks, and wastewater streams).

Title V Condition 32 requires the permittee to control fugitive HAP emissions from the Polymer Plant in accordance with the LDAR Program specified in 40 CFR 63.1331. If any requirement from NSPS Subpart VV (required by the RACT Agreement and **Title V Condition 29**) is more stringent, then then more stringent standard applies.

Monitoring/Recordkeeping

Title V Condition 33 requires LDAR records required by MACT Subpart JJJ, as well as records for Group 2 batch process vents (maximum design capacity and mass of HAP charged annually. any process changes that would affect Group 2 status), for each Group 2 storage vessel

(dimensions and design capacity), and for Group 2 wastewater streams (recordkeeping provisions from MACT Subpart G – 40 CFR 63.147(b)).

Reporting

Title V Condition 34 requires semi-annual reporting for LDAR and for the applicable information in 40 CFR 63.1335(e)(6).

Additional Polymer Plant Process Equipment (ID#'s 0118, 0119D); Railroad Car Chip Unloading Operations (ID#'s 2040-2041); and Film Plant Process Equipment including Film Line 40 (ID#'s 4011, 4012), Film Line 42 (ID#'s 4261, 4271), Film Line 43 (ID#'s 4307, 4313, 4314, 4372), Film Line 44 (ID#'s 4406, 4411, 4412, 4461, 4474), Film Line 45 (ID#'s 4511-4514, 4561, 4571), Film Line 46 (ID#'s 4606, 4611, 4661, 4671), Film Line 47 (ID#'s 4711, 4712, 4761, 4763), Primary Flake Bunkers (ID#'s 6001-6021), Intermediate Flake Bunkers (ID#'s 6041-6045), and Flake Dryers (ID#'s 6066, 6067, 6070, 6073)

MACT Subpart JJJJ (National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating) is applicable to the Film Coating Systems (ID#4025, 4225, 4325, 4425, 4525, 4625, 4725). The applicable requirements are included in a separate, dedicated section of the permit and SOB.

Limitations

Limitations for the Film Lines and Railroad Car Chip Unloading Operations were taken from the 9/3/2020 NSR Permit.

The Chapter 50 New and Modified source visible emissions standard (Rule 5-1) is taken from 9 VAC 5-50-80 from the Virginia Regulations.

Condition 1 of the 9/3/2020 NSR Permit **(Title V Condition 35)** requires particulate matter from the emissions units listed in the table to be controlled by baghouses. A device to continuously measure the differential pressure across each baghouse is required. *This is a BACT requirement. Note that emission unit ID#s 0115-0117, included in the facility equipment list, are classified as existing sources and have not had any qualifying modifications which would trigger New Source Review permitting requirements. Therefore, while the units are equipped with baghouses, there is no regulatory requirement for the baghouses on the units, and they are not included in this condition.*

Condition 2 of the 9/3/2020 NSR Permit **(Title V Condition 36)** requires VOC emissions from the film line coating application systems L40-47 (ID #4025, 4225, 4325, 4425, 4525, 4625, 4725) to be controlled by limiting VOC content to no greater than 1.0 lb VOC/gallon coating on a monthly average basis. *This is a BACT requirement.*

Condition 3 of the 9/3/2020 NSR Permit **(Title V Condition 37)** limits annual throughput of chip, flake, film, or batches for the Railroad Car Chip Unloading Operations, Film Lines L40-L47, the Virgin Chip Bunkers, Primary Flake Bunkers 1-21, Intermediate Flake Bunkers, and Flake Dryers.

Condition 4 of the 9/3/2020 NSR Permit **(Title V Condition 38)** limits annual throughput of VOC for all film coating line operations L40-L47.

Condition 5 of the 9/3/2020 NSR Permit **(Title V Condition 39)** establishes hourly and annual emission limits of PM, PM-10, and VOC for Film Lines L40-L47, the Primary Flake Bunkers 1-21, the Intermediate Flake Bunkers, and the Flake Dryers**.** This condition also includes total hourly and annual emission limits for the Film Coating Systems, which are separate from the Film Line processing operations.

Condition 6 of the 9/3/2020 NSR Permit **(Title V Condition 40)** limits visible emissions from each baghouse listed in **Title V Condition 35** to 5% opacity**.** *This is a BACT limitation.*

Condition 6 of the 9/3/2020 NSR Permit (**Title V Condition 41)** also limits visible emissions from all emissions units not controlled by baghouse to 20% opacity. *9VAC5-50-80, the visible emissions standard for New and Modified Sources in the Virginia Code, is cited in the underlying permit. However, this condition is slightly more restrictive in that it does not allow 30% opacity for a six-minute period in any hour. Therefore, this should also be considered a BACT limitation.*

Monitoring

Compliance Assurance Monitoring (CAM) is applicable for one pollutant, particulate matter (PM), for the Film Line Operations baghouses (these are active control devices that are subject to emission limitations with pre-control emissions greater than 100 tons/yr of PM). Accordingly, Teijin Films submitted a CAM plan for these baghouses. In summary, DuPont Teijin Films proposes to perform monthly operational status inspections of the equipment important to the performance of the baghouses, as well as daily visible emissions monitoring observations during equipment operation. DEQ has reviewed, and with the issuance of the Title V permit with the CAM plans included as Attachment A-1, and hereby approve the proposed CAM plans. Conditions 42-50 of the proposed Title V permit reference the CAM plan attachment and also include general CAM requirements.

Title V Condition 42 has been added to fulfill the periodic monitoring requirements for the visible emissions standards in **Title V Condition 41**. All emissions units listed in **Title V Condition 35** (except the Primary Flake Bunkers, emission unit ID #'s 6001-6021, which are included in the CAM Plan) must be observed monthly. Presence of any visible emissions will required a Method 9 evaluation to be performed on the emissions unit. Emissions units subject to CAM have an additional daily Method 22-like requirement in **Title V Condition 45.**

Title V Condition 43 has been added to fulfill the periodic monitoring requirements for differential pressure drop across each baghouse subject to the visible emissions limitations in **Title V Conditions 40 and 41**. This requirement to measure and record the differential pressure drop across each baghouse on a monthly basis ensures that the baghouses are operating properly.

Title V Conditions 44-50 *reference the CAM plan attachment and also include general CAM requirements:*

Title V Condition 44 requires the facility to conduct annual operational status inspections of all equipment important to the performance of the dust collector and filter equipment (equipment ID#s 4271, 4406, 4411-4412, 4461, 4511-4514, 4561, 4611, 4661, 4671, 4711-4712, 4761, 4763, 6001-6021, 6041-6045, 6066-6067, and 6070.

Title V Condition 45 requires daily visible observations when film coating lines and associated emission units are in operation. The visible emissions observations using Method 22-like procedures as requested by the facility were found by DEQ to be adequate to ensure compliance with the monitoring requirements. The Method 22-like procedure means that a group of process equipment within a common viewpoint is observed rather than evaluating a single stack individually. As these processes should not have any visible emissions during normal operation, any emissions which are detected during the procedure would indicate a problem with the control equipment, and corrective action would be necessary in accordance with **Title V Condition 47**.

Title V Condition 46 is a general CAM requirement requiring the facility to conduct the monitoring and fulfill the other obligations in the CAM regulation (40 CFR 65.7 through 64.9)

Title V Condition 47 requires the facility to perform corrective action and restore proper operation of any emission unit which has detectable visible emissions.

Title V Condition 48 outlines some of the information which will be used to determine if acceptable procedures were used in response to an exceedance or excursion.

Title V Condition 49 requires the permittee to provide any documentation of need for improved monitoring to DEQ, and apply for a permit modification to incorporate any necessary monitoring improvements.

Title V Condition 50 requires a Quality Improvement Plan to be submitted if the number of exceedances or excursions exceeds 5 percent duration of the operating time for the film coating lines and associated emission units.

Recordkeeping

Title V Condition 51 requires records for throughput of chip, flake, film, or batches (to demonstrate compliance with the throughput limits in **Title V Condition 37** and the emission limits in **Title V Condition 39**), annual VOC throughput for all film coating systems **(Title V**

Condition 38), and for visible emission observations required by **Title V Condition 42**, as well as any corrective action taken as a result of these inspections. This Condition also requires records of film coating VOC content (in lbs/gallon) to demonstrate compliance with **Title V Condition 36,** and for each month during which this VOC content is exceeded, the amount (gallons) of each coating formulation applied in the film coating operation that month and the volume-weighted average VOC content as applied (lbs/gal).

Title V Condition 52 includes CAM Recordkeeping requirements.
Reporting

Title V Condition 53 requires the permittee to submit records of any Method 9 opacity test performed as a result of **Title V Condition 42.**

Title V Condition 54 requires semi-annual CAM reports as part of the Title V semi-annual monitoring reports.

MACT SUBPART JJJJ (NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS: PAPER AND OTHER WEB COATING) – (ID#'s 4025, 4225, 4325, 4425, 4525, 4625, 4725)

The site is an existing major source that manufactures and coats polyester film. The coatings are prepared on site. Volatile organic HAPs are emitted as the coated film passes through the film line ovens. According to the facility's December 1, 2004 notification, compliance with the rule is achieved by using "As-applied Compliant Coating Materials" as described in 40 CFR 63.3370(c)(1), with less than 4% by weight HAPs of the as-applied coating material. The permit gives the facility to track either "as-purchased" or "as-applied" HAP content. No control device is used to control HAP emissions.

Limitations

Title V Condition 55 incorporates MACT Subpart JJJJ by reference.

Title V Condition 56 requires the permittee to comply with the emission standard in **40 CFR 63.3320(b)(2)** or **(b)(3):**

40 CFR 63.3320(b): You must limit organic HAP emissions to the level specified in paragraph (b)(1), (b)(2), (b)(3) or (4) of this section for all periods of operation, including startup, shutdown, and malfunction (SSM).

(2) No more than 4 percent of the mass of coating materials applied for each month at existing affected sources…

(3) No more than 20 percent of coating solids applied for each month at existing affected sources…

Title V Condition 57 gives the facility options to demonstrate compliance, including the use of "as-purchased' compliant coating materials, "as-applied" compliant coating materials, or tracking monthly organic HAP in accordance with **40 CFR 63.3370.**

40 CFR 63.3370(a) requires the permittee to follow the procedures set out in **40 CFR 63.3370(b) or (c)** to demonstrate compliance using "as-purchased" and "as-applied" compliant coating materials, and to follow the procedures set out in **40 CF 63.3370(d)** to demonstrate compliance by tracking monthly organic HAP applied.

Title V Condition 58 requires the facility to determine the HAP content of coating materials by following the procedures in **40 CFR 63.3360(c),** and to determine volatile and coating solids content of coating materials by following the procedures in **40 CFR 63.3360(d).**

40 CFR 63.3370(b)(1) for "as-purchased" compliant coating materials and **40 CFR 63.3370(c)(1)(i)** for "as-applied" compliant coatings require that HAP content be determined by following the procedures in **40 CFR 63.3360(c)**. For "as-applied" compliant coating materials that meet the mass fraction of coating solids standard **(40 CFR 63.3320(b)(3)**), **40 CFR 63.3370(c)(2)(i)** requires the "as-applied" coating solids content of each coating material to be determined following the procedure in **40 CFR 63.3360(d).**

Monitoring/Recordkeeping

Title V Condition 59 includes applicable recordkeeping requirements from MACT Subpart JJJJ. Records of emissions in excess of the standard have been added **(40 CFR 63.3410(c)(3))**, as well as the provision that records in electronic format to be submitted to CEDRI must also be provided to DEQ or EPA upon request as part of an on-site compliance evaluation **(40 CFR 63.3410(e))**.

Reporting

Title V Condition 60 requires semi-annual compliance reporting as part of the Title V semi-annual monitoring reports. Reference to electronic reporting to EPA via CEDRI has been added **(40 CFR 63.3400(h))**.

Facility Wide Conditions

Certain requirements that apply on a plant-wide basis are included in Facility Wide Conditions. These requirements are taken from the 9/3/2020 NSR Permit and the 11/30/1999 Consent Order.

Limitations

Title V Condition 61 limits facility-wide VOC emissions to 223.3 tons per year. *This condition is taken from Condition D.4 of the 11/30/1999 Consent Order.*

Monitoring/Recordkeeping

Title V Condition 62 requires the facility to develop a maintenance schedule, operating procedures, training procedures, and maintain an inventory of spare parts for air pollution control equipment in order to minimize the duration and frequency of excess emissions. *This condition is taken from Condition 11 of the 9/3/2020 NSR permit, but applies facility-wide.*

Title V Condition 63 requires records of all information necessary to demonstrate compliance with the emission limit in Title V Condition 61, and all records required by **Title V Condition 62** are required to be available at the facility for a period of five years.

Testing

Title V Condition 64 requires the facility to be constructed to allow for emissions testing at any time.

Title V Condition 65 specifies the testing methods that may be used in addition to the monitoring required by the permit conditions to ensure compliance with established limits.

INSIGNIFICANT EMISSIONS UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9VAC5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720B)
0105	Polymer Plant L1 Monomer Filter Vent	5-80-720 B	VOC
0106	Polymer Plant L2 Monomer Filter Vent	5-80-720 B	VOC
0107	Polymer Plant L3 Monomer Filter Vent	5-80-720 B	VOC
0108	Polymer Plant L4 Monomer Filter Vent	5-80-720 B	VOC
0111	Polymer Plant L1 Chip Water Dryer Vent	5-80-720 B	PM/PM-10
0112	Polymer Plant L2 Chip Water Dryer Vent	5-80-720 B	PM/PM-10
0113	Polymer Plant L3 Chip Water Dryer Vent	5-80-720 B	PM/PM-10
0114	Polymer Plant L4 Chip Water Dryer Vent	5-80-720 B	PM/PM-10
0121	Wastewater Contingency Tank #3	5-80-720 B	VOC
0124	Virgin Glycol Tank A Vent	5-80-720 B	VOC
0125	Virgin Glycol Tank B Vent	5-80-720 B	VOC
0129	Recovered Glycol Tank A Vent	5-80-720 B	VOC

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720B)
0130	Recovered Glycol Tank B Vent	5-80-720 B	VOC
0131	Recovered Glycol Tank C Vent	5-80-720 B	VOC
0132	Recovered Glycol Tank D Vent	5-80-720 B	VOC
0133	Recovered Glycol Tank E Vent	5-80-720 B	VOC
0134	Recovered Glycol Tank F Vent	5-80-720 B	VOC
0135	Fores Tank	5-80-720 B	VOC
0136	Blended Glycol Tank Vent	5-80-720 B	VOC
0139	Effluent Tank	5-80-720 B	VOC
0140	Polymer Plant Caustic Tank	5-80-720 B	VOC
0141	Dowtherm Tank	5-80-720 B	VOC
0153	Still #1 Seal Pot Vent	5-80-720 B	VOC
0154	Still #2 Seal Pot Vent	5-80-720 B	VOC
0162	Polymer QC Lab Hood	5-80-720 B	VOC
0163	Polymer QC Lab Hood	5-80-720 B	VOC
0164	Polymer QC Lab Hood	5-80-720 B	VOC
0165	Polymer QC Lab Hood	5-80-720 B	VOC
0166	Autoclave Agitator Motor Air Vent	5-80-720 B	VOC
0167	Autoclave Agitator Motor Air Vent	5-80-720 B	VOC
0168	Autoclave Agitator Motor Air Vent	5-80-720 B	VOC
0169	Autoclave Agitator Motor Air Vent	5-80-720 B	VOC
0170	Ball Mill/Slurry Room Exhaust	5-80-720 B	VOC
0171	Polymer Maintenance Shop Room Vent	5-80-720 B	PM/PM-10
0172	Polymer Shop Welding Hood Vent	5-80-720 B	PM/PM-10
0174	Catalyst Preproom Hood	5-80-720 B	VOC
0175	Blue Dye Exhaust Hood	5-80-720 B	VOC
0176	Syloid Mix Area	5-80-720 B	PM/PM-10
0178	Propane Tank	5-80-720 B	VOC
0192	TA Unloading, Storage and Feed System Polymer	5-80-720 B	PM/PM-10
0193	TA Unloading, Storage and Feed System Polymer	5-80-720 B	PM/PM-10
0194a	IPA Unloading and Feed System for Line 1	5-80-720 B	PM/PM-10
0194b	Azelaic Acid Unloading and Feed System for Line 1	5-80-720 B	PM/PM-10
0195	IPA Unloading and Feed System for Line 2	5-80-720 B	PM/PM-10
0196	IPA Unloading and Feed System for Line 3	5-80-720 B	PM/PM-10
0200	Inorganic Solid Additive System for Lines 2 and 3	5-80-720 B	PM/PM-10
1021	Fuel Oil Tank #1	5-80-720 B	VOC

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720B)
1022	Fuel Oil Tank #2	5-80-720 B	VOC
1023	Utilities Caustic Tank	5-80-720 B	VOC
1027	Wastewater Surge Tank	5-80-720 B	VOC
2042a	B83 Crystallizer Cyclone Vent	5-80-720 B	PM/PM-10
2042b	B83 Crystallizer	5-80-720 B	PM/PM-10
2043	Truck Loading Station Cyclone	5-80-720 B	PM/PM-10/VOC
2044	Chip Container Unloading System	5-80-720 B	PM/PM-10
3001-3019	Reclaim Chip Bunkers #1-19	5-80-720 B	PM/PM-10
3020	Chip Transfer Cyclone	5-80-720 B	PM/PM-10
3021	Chip Transfer Cyclone #2	5-80-720 B	PM/PM-10
3022	Reclaim Tote System	5-80-720 B	PM/PM-10
4041	L40 Corona Treater	5-80-720 B	VOC
4071	L40 Extruder Area Vent	5-80-720 B	PM/PM-10
4274	L42 Clip & Web Cleaner Exhaust	5-80-720 B	PM/PM-10
4275	L42 Mezzanine Exhaust (relocated from L41)	5-80-720 B	PM/PM-10
4276	L42 Clip Cleaner Exhaust	5-80-720 B	PM/PM-10
4312	L43 Crystallizer – Steam	5-80-720 B	PM/PM-10
4441	L44 Corona Treater	5-80-720 B	VOC
4472	L44 Extruder Area Vent #1	5-80-720 B	PM/PM-10
4473	L44 Extruder Area Vent #2	5-80-720 B	PM/PM-10
4572	L45 Latex Prep. Room Vent	5-80-720 B	VOC
4573	L45 Latex Room Flex Exhaust Vent	5-80-720 B	VOC
4575	L45 Extruder Area Vent	5-80-720 B	PM/PM-10
4613	L46 Crystallizer – Steam	5-80-720 B	PM/PM-10
4641	L46 Web Slitting and Edge Trim Exhaust	5-80-720 B	PM/PM-10
4672	L46 Extruder Area Vent	5-80-720 B	PM/PM-10
4722	L47 Tinuvin Vent	5-80-720 B	VOC
4731	L47 Corona Treater #1	5-80-720 B	VOC
4741	L47 Corona Treater #2	5-80-720 B	VOC
4764	L47 Lab Hood Exhaust	5-80-720 B	VOC
4765	L47 QC Lab Oven Vent	5-80-720 B	VOC
4771	L47 Latex Prep Room Exhaust	5-80-720 B	VOC
4773	L47 Extruder Area Vent	5-80-720 B	PM/PM-10
5001	Heat Stabilizing Oven Zone 1 Burner Vent	5-80-720 B	PM/PM-10/VOC
5002	Heat Stabilizing Oven Zone 2 Burner Vent	5-80-720 B	PM/PM-10/VOC
5003	Heat Stabilizing Oven Zone 3 Burner Vent	5-80-720 B	PM/PM-10/VOC
5004	Heat Stabilizing Oven Zone 4 Burner Vent	5-80-720 B	PM/PM-10/VOC

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720B)
5005	Heat Stabilizing Oven Zone 5 Burner Vent	5-80-720 B	PM/PM-10/VOC
5011	Heat Stabilizing Oven Zone 1 Exhaust	5-80-720 B	PM/PM-10/VOC
5012	Heat Stabilizing Oven Zone 2 Exhaust	5-80-720 B	PM/PM-10/VOC
5013	Heat Stabilizing Oven Zone 3 Exhaust	5-80-720 B	PM/PM-10/VOC
5014	Heat Stabilizing Oven Zone 4 Exhaust	5-80-720 B	PM/PM-10/VOC
5015	Heat Stabilizing Oven Zone 5 Exhaust	5-80-720 B	PM/PM-10/VOC
6061-6065	Pelletizer Chip Water Dryers	5-80-720 B	PM/PM-10
6075	Flake and Fines Box-Out	5-80-720 B	PM/PM-10
6076	Railcar/Truck Chip Transfer	5-80-720 B	PM/PM-10
6079	Pelletizing Area Exhaust	5-80-720 B	PM/PM-10/VOC
6080	Pelletizing Area Exhaust	5-80-720 B	PM/PM-10/VOC
6081	Pelletizing Automatic Die/Filter Exhaust	5-80-720 B	PM/PM-10/VOC
6082	Pelletizing Automatic Die/Filter Exhaust	5-80-720 B	PM/PM-10/VOC
7001	Filter Shop Sump	5-80-720 B	VOC
7002	Pack Shop Caustic Tank	5-80-720 B	VOC
7005	Die Shop Sink Feed	5-80-720 B	VOC
7006	Die Shop A/C Hood	5-80-720 B	VOC
7007	Pack Shop Pump Room , 1st Floor	5-80-720 B	VOC
7008	Pack Shop Pump Room, 2nd Floor	5-80-720 B	VOC
7021	Ultrasonic Cleaner	5-80-720 B	PM/PM-10
7022	Main Shop Welding	5-80-720 B	PM/PM-10
7023	Forktruck Battery Hood (West)	5-80-720 B	VOC
7024	Forktruck Battery Hood (East)	5-80-720 B	VOC
8000	Innovation Center (I.C.) Ball Mill A	5-80-720 B	PM/PM-10
8001	I.C. Ball Mill B	5-80-720 B	PM/PM-10
8002	I.C. 1st Floor Fume Hoods	5-80-720 B	VOC
8003	I.C. 2nd Floor Fume Hoods	5-80-720 B	VOC
8004	I.C. Maintenance Shop	5-80-720 B	PM/PM-10
8005	I.C. Ball Mill Flex Vent	5-80-720 B	VOC
8006	I.C. Eductor Hood 1” Extruder	5-80-720 B	VOC
8007	I.C. Instrument Hood	5-80-720 B	VOC
8008	I.C. Technical Dryer Vent	5-80-720 B	VOC
8010	I.C. Storage Building Flex Line	5-80-720 B	VOC
8021	Tech Service Wet Lab	5-80-720 B	VOC
8022	Tech Service High Bay	5-80-720 B	VOC
8023	Tech Service Solvent Storage Exhaust	5-80-720 B	VOC
8031	Film QC Lab	5-80-720 B	VOC

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720B)
8032	Main Latex Stirrer	5-80-720 B	VOC
8033	Main Latex Tank	5-80-720 B	VOC
8034	L40/L45 Stirrer	5-80-720 B	VOC
8035	L40/L45 Flex Line	5-80-720 B	VOC
8036	L40/L45 Lab Hood	5-80-720 B	VOC
9060	P6 Slitter Blade Exhaust	5-80-720 B	PM/PM-10
9080	P8 Slitter Blade Exhaust	5-80-720 B	PM/PM-10
9090	P9 Slitter Blade Exhaust	5-80-720 B	PM/PM-10
9100	P10 Slitter Blade Exhaust	5-80-720 B	PM/PM-10
9112	P11 Slitter Blade Exhaust	5-80-720 B	PM/PM-10
9122	P12 Slitter Blade Exhaust	5-80-720 B	PM/PM-10
9123	P12 Slitter Main Drive	5-80-720 B	PM/PM-10
9131	P13 Slitter Blade Exhaust (cabinet)	5-80-720 B	PM/PM-10
9132	P13 Slitter Corona Treater	5-80-720 B	VOC
9510	P8-10 Slitter Edge Trim Cyclone	5-80-720 B	PM/PM-10
9520	Core Cutter	5-80-720 B	PM/PM-10

[1]The citation criteria for insignificant activities are as follows:
9VAC5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application
9VAC5-80-720 B - Insignificant due to emission levels
9VAC5-80-720 C - Insignificant due to size or production rate

PERMIT SHIELD AND INAPPLICABLE REQUIREMENTS

Citation	Title of Citation	Description of Applicability
40 CFR 63, Subpart EEEE	National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline)	This standard was previously applicable to the methanol loading racks that were part of the dimethyl terephthalate (DMT) process for producing polymer chips. The facility now produces polymer chips using the terephthalic acid (TA) process, which does not produce methanol.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9VAC5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting

semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

Comments on General Conditions

Federal Enforceability

Article 1 (9VAC5-80-110 N) states that all terms and conditions in the Title V permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.

Permit Expiration

This condition refers to the Board taking action on a permit application. The "Board" refers to the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.2-604 and §10.1-1185 of the Code of Virginia, and the "Department of Environmental Quality Agency Policy Statement No. 2-09".

This general condition cite(s) the Article(s) that follow(s):

(For TV): Article 1 (9VAC5-80-50 et seq.), Part II of 9VAC5 Chapter 80. Federal Operating Permits for Stationary Sources

This general condition cites the sections that follow:
9VAC5-80-80. Application
9VAC5-80-140. Permit Shield
9VAC5-80-150. Action on Permit Applications

Failure / Malfunction Reporting

Section 9VAC5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9VAC5-20-180 is from the general regulations. All affected facilities are subject to section 9VAC5-20-180 including Title V facilities. A facility may make a single report that meets the requirements of 9VAC5-20-180. The report must be made within four daytime business hours of discovery of the malfunction.

This general condition cites the sections that follow:

9VAC5-40-41. Emissions Monitoring Procedures for Existing Sources
9VAC5-40-50. Notification, Records and Reporting
9VAC5-50-50. Notification, Records and Reporting

Permit Modification

This general condition cites the sections that follow:

9VAC5-80-50. Applicability, Federal Operating Permit for Stationary Sources
9VAC5-80-190. Changes to Permits
9VAC5-80-260. Enforcement
9VAC5-80-1100. Applicability, Permits For New and Modified Stationary Sources
9VAC5-80-1605. Applicability, Permits For Major Stationary Sources and Modifications Located in Prevention of Significant Deterioration Areas
9VAC5-80-2000. Applicability, Permits for Major Stationary Sources and Major Modifications Locating in Nonattainment Areas

Asbestos Requirements

The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40 CFR 61 Subpart M, National Emission Standards for Asbestos.

This general condition contains a citation from the Code of Federal Regulations that follows:
40 CFR 61.145, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to demolition and renovation.
40 CFR 61.148, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to insulating materials.
40 CFR 61.150, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to waste disposal.

This general condition cites the regulatory sections that follow:
9VAC5-60-70. Designated Emissions Standards
9VAC5-80-110. Permit Content

FUTURE APPLICABLE REQUIREMENTS

None identified.

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION

The proposed permit will be placed on public notice from March 4, 2022 to April 4, 2022. The notice will be published in the *Richmond Times-Dispatch* newspaper on March 4, 2022. The proposed permit will be sent to EPA Region III for a concurrent 45-day review period.